Montana
Basin Outlook Report
March 1, 1993

In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

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Once again, storms have been splitting around Montana leaving thirteen of the fourteen major river basins across Montana with snowpacks below to well below average.

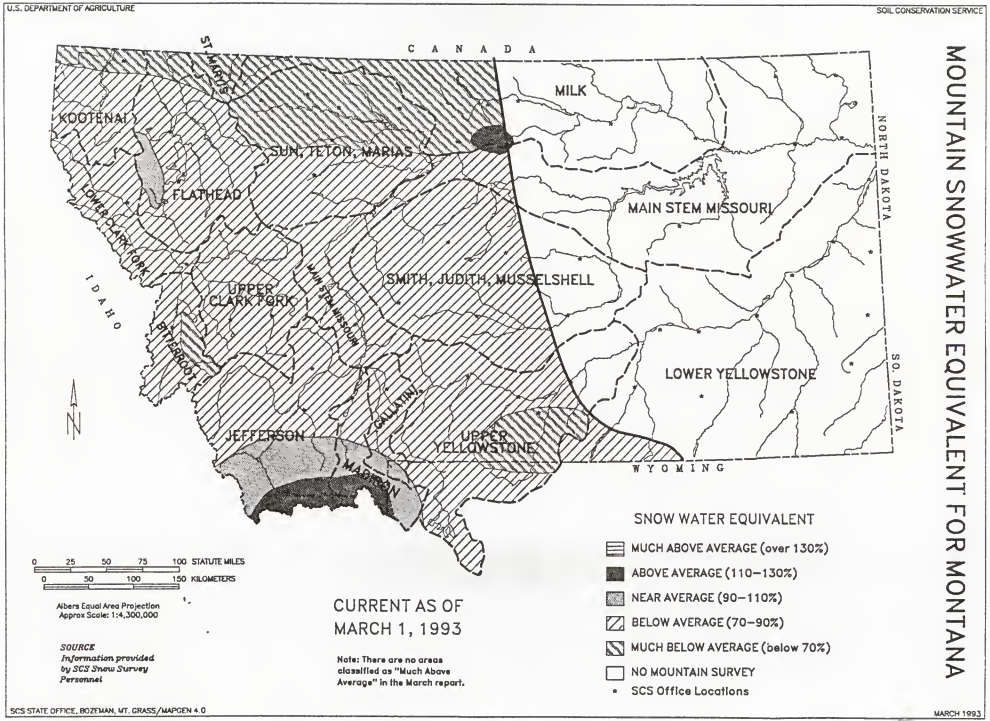
SNOWPACK

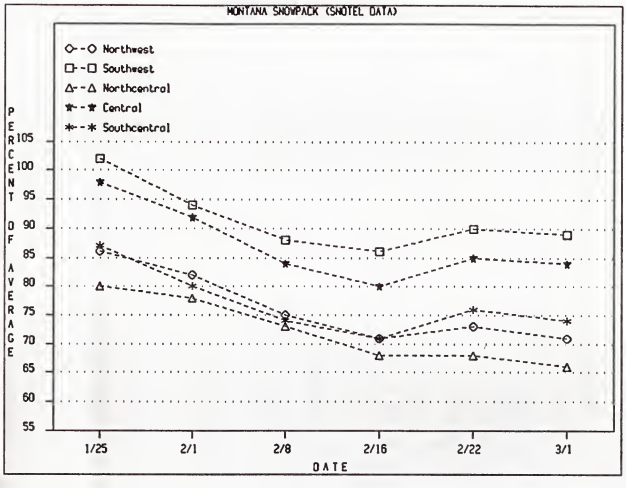
February snow surveys show snowpack percents of average have decreased in every major river basin from one month ago. The greatest decrease in percent of average was in the Flathead River Basin dropping 14 percent from February 1 with the least decrease in percent of average in the Madison River Basin dropping 3 percent from February 1.

The lowest March 1 snowpack measurements occurred once again along the East Side Bitterroot Watershed (Bitterroot River Basin) at 67 percent of average and the highest was in the Bear Paw Mountain Watershed (Milk River Basin) at 113 percent of average.

West of the Continental Divide, snowpacks are below to well below average and are slightly below those of last year. East of the Continental Divide snowpacks are generally near to below average.

RIVER BASIN	% OF AVERAGE	% OF LAST YEAR
KOOTENAI	73	90
FLATHEAD	78	92
UPPER CLARK FORK	74	94
BITTERROOT	74	93
LOWER CLARK FORK	77	91
JEFFERSON	84	90
MADISON	102	118
GALLATIN	84	103
MAINSTEM MISSOURI	85	108
SMITH-JUDITH-MUSSELSHELL	87	114
SUN-TETON-MARIAS	71	86
ST. MARY AND MILK	77	104
UPPER YELLOWSTONE	77	97
LOWER YELLOWSTONE	75	101


U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
MOUNTAIN SNOWWATER EQUIVALENT FOR MONTANA
CANADA
ST MARY'S
KOOTENAI
SUN, TETON, MARIAS
MILK
FLATHEAD
LOWER CLARK FORK
MAIN STEM MISSOURI
NORTH DAKOTA
IDAHO
UPPER CLARK FORK
SMITH, JUDITH, MUSSELSHELL
MAIN STEM MISSOURI
STILLWATER
LOWER YELLOWSTONE
SO. DAKOTA
GALLATIN
JEFFERSON
UPPER YELLOWSTONE
MADISON
WYOMING
N
0 25 50 75 100 STATUTE MILES
0 50 100 150 KILOMETERS
Albers Equal Area Projection
Approx Scale: 1:4,300,000
SOURCE
Information provided by SCS Snow Survey Personnel
CURRENT AS OF MARCH 1, 1993
Note: There are no areas classified as "Much Above Average" in the March report.
SNOW WATER EQUIVALENT
MUCH ABOVE AVERAGE (over 130%)
ABOVE AVERAGE (110–130%)
NEAR AVERAGE (90–110%)
BELOW AVERAGE (70–90%)
MUCH BELOW AVERAGE (below 70%)
NO MOUNTAIN SURVEY
SCS Office Locations
SCS STATE OFFICE, BOZEMAN, MT. GRASS/MAPGEN 4.0
MARCH 1993


MONTANA SNOWPACK (SNOTEL DATA)
Northwest
Southwest
Northcentral
Central
Southcentral
PERCENT OF AVERAGE
105
100
95
90
85
80
75
70
65
60
55
1/25
2/1
2/8
2/16
2/22
3/1
DATE

PRECIPITATION

February mountain precipitation west of the Continental Divide was well below average and east of the Continental Divide ranged from below to well below average. Water year precipitation west of the Continental Divide is below average and east of the Continental Divide is near to slightly below average.

Valley precipitation for February started out dry. There was normal valley precipitation during the second and third weeks, then tapered off from little to none by month's end. West of the Divide, precipitation was below normal. Valley precipitation, East of the Divide, was quite varied, with the northern half and southwestern areas above normal and southeastern areas below normal. February snowfall was around 18 inches for Helena and 8 inches in Glasgow (which was the most they've seen during February since 1989).

RIVER BASIN	FEBRUARY % OF AVERAGE	WATER YEAR % OF AVERAGE
KOOTENAI	32	73
FLATHEAD	33	77
UPPER CLARK FORK	59	80
BITTERROOT	47	73
LOWER CLARK FORK	40	72
JEFFERSON	67	86
MADISON	81	104
GALLATIN	51	89
MAINSTEM MISSOURI	58	87
SMITH-JUDITH-MUSSELSHELL	57	96
SUN-TETON-MARIAS	35	76
ST. MARY AND MILK	36	78
UPPER YELLOWSTONE	55	81
LOWER YELLOWSTONE	52	84

RESERVOIRS

Reservoir storages remain well below average in the Flathead River, Bitterroot River, Jefferson River, and St. Mary and Milk River Basins; below average in the Kootenai River, Upper Clark Fork River, Lower Clark Fork River, Mainstem Missouri River, and Gallatin River Basins; near average in the Madison River, Sun-Teton-Marias River, Upper Yellowstone River, and Lower Yellowstone River Basins; and above average in the Smith-Judith-Musselshell River Basins.

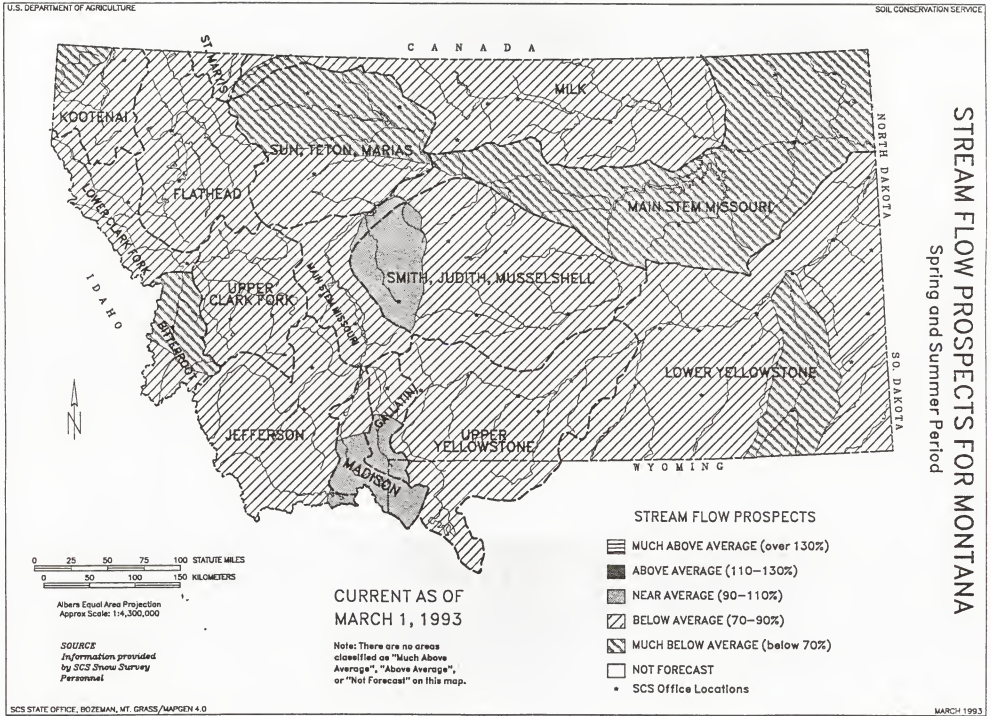
RIVER BASIN	% OF CAPACITY	% OF AVERAGE
KOOTENAI	30	88
FLATHEAD	29	50
UPPER CLARK FORK	51	76
BITTERROOT	6	17
LOWER CLARK FORK	68	76
JEFFERSON	28	52
MADISON	70	104
GALLATIN	26	71
MAINSTEM MISSOURI	67	88
SMITH-JUDITH-MUSSELSHELL	71	120
SUN-TETON-MARIAS	50	109
ST. MARY AND MILK	25	57
UPPER YELLOWSTONE	43	99
LOWER YELLOWSTONE	59	99

STREAMFLOW

February streamflows west of the Continental Divide were generally well below average and those east of the Continental Divide are generally below average.

Assuming current conditions persist, seasonal volume streamflows are forecast to be below average for the Columbia River in Montana; below to well below average for the Missouri River; and below average for the Yellowstone River.

RIVER BASIN	FORECASTS % OF AVERAGE	FORECASTS % OF LAST YEAR
KOOTENAI	71	80
FLATHEAD	77	92
UPPER CLARK FORK	75	105
BITTERROOT	70	96
LOWER CLARK FORK	77	103
JEFFERSON	73	85
MADISON	89	92
GALLATIN	88	111
MAINSTEM MISSOURI	71	82
SMITH-JUDITH-MUSSELSHELL	87	115
SUN-TETON-MARIAS	65	78
ST. MARY AND MILK	82	105
UPPER YELLOWSTONE	77	91
LOWER YELLOWSTONE	76	90


U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
STREAM FLOW PROSPECTS FOR MONTANA
Spring and Summer Period
CANADA
ST MARY'S
KOOTENAI
MILK
SUN, TETON, MARIAS
NORTH DAKOTA
FLATHEAD
LOWER CLARK FORK
MAIN STEM MISSOURI
SMITH, JUDITH, MUSSELSHELL
IDAHO
UPPER CLARK FORK
MAIN STEM MISSOURI
BITTERROOT
LOWER YELLOWSTONE
SO. DAKOTA
GALLATIN
JEFFERSON
UPPER YELLOWSTONE
MADISON
WYOMING
N
0 25 50 75 100 STATUTE MILES
0 50 100 150 KILOMETERS
Albers Equal Area Projection
Approx Scale: 1:4,300,000
SOURCE
Information provided by SCS Snow Survey Personnel
CURRENT AS OF MARCH 1, 1993
Note: There are no areas classified as "Much Above Average", "Above Average", or "Not Forecast" on this map.
STREAM FLOW PROSPECTS
MUCH ABOVE AVERAGE (over 130%)
ABOVE AVERAGE (110–130%)
NEAR AVERAGE (90–110%)
BELOW AVERAGE (70–90%)
MUCH BELOW AVERAGE (below 70%)
NOT FORECAST
SCS Office Locations
SCS STATE OFFICE, BOZEMAN, MT. GRASS/MAPGEN 4.0
MARCH 1993

SOIL MOISTURE

Based on fall precipitation and streamflows and current soil moisture beneath the snowpack, soil moisture conditions in the Kootenai River, Lower Clark Fork River, Bitterroot River and Jefferson River Basins are well below average. All other basins are slightly below to near average.

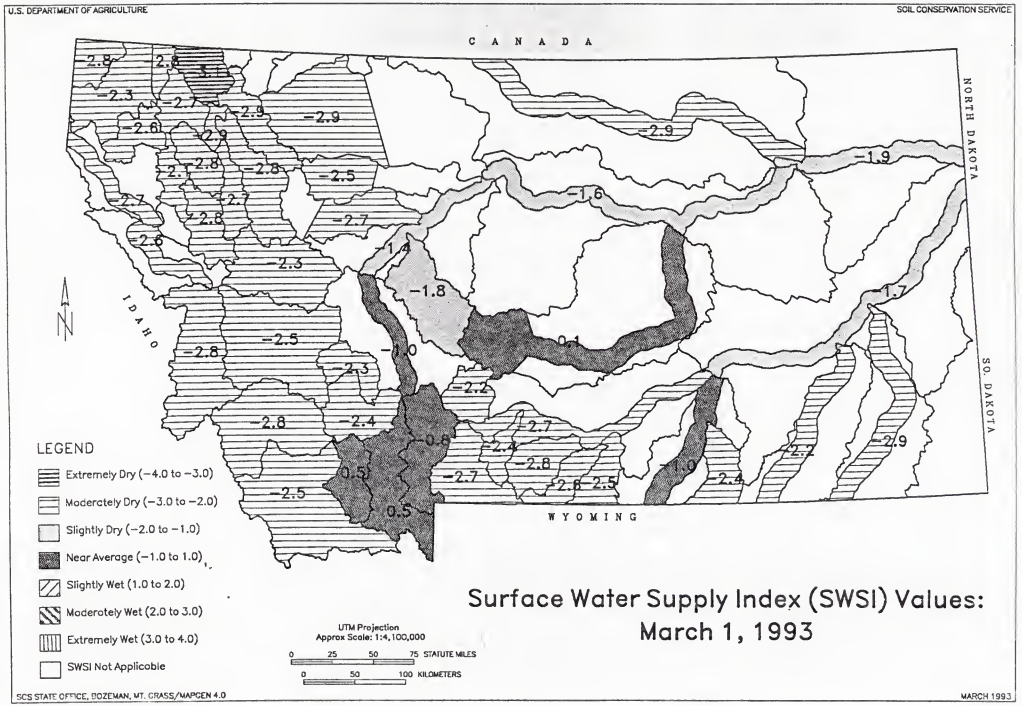
SURFACE WATER SUPPLY INDEX

The Surface Water Supply Index (SWSI) is a measure of available surface water supplies during the spring and summer months. The index ranges from -4.0 to +4.0. A SWSI of -4.0 represents an extremely dry condition, 0 is a near normal condition and +4.0 represents an extremely wet condition. The SWSI provides a scale to evaluate various levels of wetness or dryness and water supply conditions across the state. The SWSI takes into account snowpack, mountain precipitation, soil moisture and available reservoir storage.

SWSI RATING	SURFACE WATER CONDITION
+3.0 to +4.0	Extremely Wet
+2.0 to +3.0	Moderately Wet
+1.0 to +2.0	Slightly Wet
-1.0 to +1.0	Near Average
-1.0 to -2.0	Slightly Dry
-2.0 to -3.0	Moderately Dry
-3.0 to -4.0	Extremely Dry

SWSI's as of March 1, 1993 for the remainder of the 1993 irrigation season.

SWSI Rating	Basin
-3.4	Kootenai River at Ft. Steele (Kootenai in Canada)
-2.8	Tobacco River
-2.8	Kootenai Ft. Steele to Libby Dam
-2.3	Kootenai River below Libby Dam
-2.6	Fisher River
-2.9	Yaak River
-3.1	North Fork Flathead River
-2.9	Middle FORK Flathead River
-2.8	South Fork Flathead River
-2.9	Flathead River at Columbia Falls
-2.7	Stillwater/Whitefish Rivers
-2.7	Swan River
-2.8	Flathead River at Polson
-2.8	Mission Valley
-2.1	Little Bitterroot River
-2.7	Clark Fork River above Rock Creek
-2.3	Blackfoot River
-2.8	Bitterroot River
-2.5	Clark Fork River above Missoula
-2.6	Clark Fork River below Bitterroot River
-2.7	Clark Fork River below Flathead River
-2.5	Beaverhead River
0.5	Ruby River
-2.8	Big Hole River
-2.3	Boulder River (Jefferson)
-2.4	Jefferson River
0.5	Madison River
-0.8	Gallatin River
-1.0	Missouri River above Canyon Ferry
-1.4	Missouri River below Canyon Ferry
-1.8	Smith River
-2.7	Sun River
-2.5	Teton River
-3.1	Birch/Dupuyer Creeks
-2.9	Marias River
0.1	Musselshell River
-1.6	Missouri River above Ft. Peck
-1.9	Missouri River below Ft. Peck
-2.9	Milk River (USBR users)
-2.8	Milk River (other users)
-2.7	Yellowstone River above Livingston
-2.2	Shields River
-2.4	Boulder River (Yellowstone)
-2.8	Stillwater River
-2.6	Rock/Red Lodge Creeks
-2.5	Clarks Fork River
-2.7	Yellowstone River above Bighorn River
-1.0	Bighorn River below Bighorn Lake
-2.4	Little Bighorn River
-1.7	Yellowstone River below Bighorn River
-2.2	Tongue River
-2.9	Powder River


U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
CANADA
NORTH DAKOTA
SO. DAKOTA
IDAHO
WYOMING
LEGEND
Extremely Dry (−4.0 to −3.0)
Moderately Dry (−3.0 to −2.0)
Slightly Dry (−2.0 to −1.0)
Near Average (−1.0 to 1.0)
Slightly Wet (1.0 to 2.0)
Moderately Wet (2.0 to 3.0)
Extremely Wet (3.0 to 4.0)
SWSI Not Applicable
UTM Projection
Approx Scale: 1:4,100,000
0 25 50 75 STATUTE MILES
0 50 100 KILOMETERS
Surface Water Supply Index (SWSI) Values:
March 1, 1993
SCS STATE OFFICE, BOZEMAN, MT. GRASS/MAPGEN 4.0
MARCH 1993

Forecast Pt / Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
WHITEFISH nr Kalispell							
APR-JUL	71	80	87	83	94	104	104
APR-SEP	82	92	99	85	106	116	116
SWAN nr Bigfork							
APR-JUL	405	455	485	83	515	565	583
APR-SEP	465	520	555	83	590	645	665
FLATHEAD nr Polson (1,2)							
APR-JUL	3740	4510	4860	76	5210	5980	6390
APR-SEP	4070	4900	5280	76	5660	6490	6926

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

FLATHEAD RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
CAMAS (4)	45.2	17.3	31.7	21.0
MISSION VALLEY (8)	100.0	26.3	26.8	37.8
HUNGRY HORSE	3451.0	844.0	1894.0	2205.0
FLATHEAD LAKE	1791.0	684.8	597.2	881.0

FLATHEAD RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
NORTH FORK FLATHEAD	13	86	75
MIDDLE FORK FLATHEAD	8	86	70
SOUTH FORK FLATHEAD	8	88	79
STILLWATER-WHITEFISH	8	94	83
SWAN	9	89	77
MISSION VALLEY	5	92	76
LITTLE BITTERROOT-ASHLEY	9	123	94
JOCKO	5	94	80
FLATHEAD	45	92	78

UPPER CLARK FORK RIVER BASIN as of March 1, 1993

Snowpack conditions in the Upper Clark Fork River Basin remain below average and dropped 7 percent from last month and was 6 percent below last year. Snow water content was 74 percent of average and 94 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation for February was once again well below average at 59 percent and but was nearly 40 percent higher than last February. Water year precipitation, beginning October 1, 1992, remains below average at 80 percent and is the same as last year.

Reservoir storage on the last day of February was 76 percent of average and 31 percent below last year. Georgetown Lake storage was 89 percent of average and 21 percent below last year; Lower Willow Creek storage was 76 percent of average and 13 percent below last year; and Nevada Creek storage was 8 percent of average and 92 percent below last year.

Streamflows are forecast to be below average at 75 percent of average and 5 percent above last year. February inflow at Moulton Reservoir was 25 percent of average; Flint Creek near Southern Cross was 31 percent of average and 43 percent below last year; Rock Creek near Clinton was 54 percent of average; the Clark Fork River above Missoula was 62 percent of average and 22 percent below last year; and the Clark Fork River at Missoula was 35 percent of average.

UPPER CLARK FORK RIVER BASIN
Streamflow Forecasts - March 1, 1993

Forecast Pt	<--- Drier --- Future Conditions --- Wetter --->					
	Chance of Exceeding *					
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
MOULTON RES inflow (million gal.)							
APR-JUN	69	120	154	72	188	240	212
APR-JUL	71	128	166	70	205	260	234
WARM SPRINGS CK at Anaconda (2)							
APR-JUL	17.0	24	28	73	33	39	38
APR-SEP	23	30	35	74	40	47	47
LITTLE BLACKFOOT nr Garrison							
APR-JUL	10.6	40	60	72	80	109	83
APR-SEP	12.2	44	65	73	86	118	89
FLINT CK nr Southern Cross (2)							
APR-JUL	5.1	8.3	10.4	73	12.5	15.7	14.2
APR-SEP	5.4	9.4	12.1	72	14.8	18.8	16.7
FLINT CK bl Boulder Ck							
APR-JUL	20	33	41	71	49	62	57
APR-SEP	30	44	54	73	64	79	73

Forecast Pt Forecast Period	<=== Drier === Future Conditions === Wetter ===> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
LOWER WILLOW CK RES inflow							
APR-JUL	3.7	7.1	9.5	67	11.9	15.3	14.0
APR-SEP	4.2	7.8	10.2	68	12.6	16.2	14.8
MF ROCK CK nr Philipsburg							
APR-JUL	35	43	49	74	55	63	66
APR-SEP	39	49	55	74	61	71	74
ROCK CK nr Clinton							
APR-JUL	146	187	215	72	245	285	296
APR-SEP	174	220	250	75	280	325	333
NEVADA CK nr Finn							
APR-JUL	6.0	11.5	15.2	79	18.9	24	19.1
APR-SEP	7.1	12.9	16.8	80	21	27	21
CLEARWATER nr Clearwater							
APR-JUL	108	121	130	75	139	152	172
APR-SEP	115	129	138	76	147	161	181
BLACKFOOT nr Bonner							
APR-JUL	455	555	620	74	685	785.	835
APR-SEP	515	620	695	75	770	875	926
CLARK FORK ab Milltown							
APR-JUL	260	405	500	76	595	740	652
APR-SEP	315	475	580	76	685	845	755
CLARK FORK ab Missoula							
APR-JUL	745	970	1120	75	1270	1490	1487
APR-SEP	865	1110	1270	75	1430	1680	1681

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER CLARK FORK RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
GEORGETOWN LAKE	31.0	22.9	28.9	25.7
LOWER WILLOW CREEK	4.9	1.3	1.5	1.7
NEVADA CREEK	12.6	0.4	5.0	5.0

UPPER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
CLARK FORK ab FLINT CREEK	16	92	76
FLINT CREEK	7	95	77
ROCK CREEK	5	89	72
CLARK FORK ab BLACKFOOT	25	92	75
BLACKFOOT	16	96	74
UPPER CLARK FORK	38	93	74

BITTERROOT RIVER BASIN as of March 1, 1993

Snowpack conditions in the Bitterroot River Basin remain below average, decreased 10 percent from February 1 and are 7 percent below last year. Snow water content was 74 percent of average and 93 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation for February was again well below average at 47 percent and was 2 percent below last year. Water year precipitation, beginning October 1, 1992, dropped to below average at 73 percent and 14 percent below last year.

Reservoir storage on the last day of February was 17 percent of average and 57 percent below last year. Painted Rocks Lake storage was 13 percent of average but 45 percent above last year and Como storage was 20 percent of average and 70 percent below last year (Como Lake was drained to rework the dam).

Streamflows are forecast to be below average at 70 percent (which is almost a well below average category at <70 percent) and 4 percent below last year. February streamflow for the Bitterroot near Darby was 61 percent of average; Rock Creek Como inflow to Darby was 48 percent of average; and the Bitterroot at Missoula was 35 percent of average.

BITTERROOT RIVER BASIN
Streamflow Forecasts - March 1, 1993

	<== Drier ==	Future Conditions	== Wetter ==>			
Forecast Pt	Chance of Exceeding *					
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
WF BITTERROOT nr Conner (2)							
APR-JUL	66	90	106	69	122	146	152
APR-SEP	71	97	114	68	131	157	166
BITTERROOT nr Darby							
APR-JUL	240	300	345	70	390	450	491
APR-SEP	270	335	380	70	425	490	540
ROCK CK nr Darby (2)							
APR-JUL	50	58	63	79	68	76	79
APR-SEP	54	62	67	80	72	80	83
SKALKAHO CK nr Hamilton							
APR-JUL	22	27	31	67	35	40	46
APR-SEP	27	33	37	69	41	47	53
BURNT FORK CK nr Stevensville (2)							
APR-JUL	13.3	17.9	21	72	24	29	29
APR-SEP	16.1	21	25	73	29	34	34

Forecast Pt / Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
BITTERROOT at Missoula							
APR-JUL	680	810	900	69	990	1120	1301
APR-SEP	755	895	990	69	1090	1230	1418

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

BITTERROOT RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
PAINTED ROCKS LAKE	31.7	1.6	1.1	12.3
COMO	34.9	2.6	8.6	13.1

BITTERROOT RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
WEST FORK BITTERROOT	4	98	76
EAST SIDE BITTERROOT	4	84	67
WEST SIDE BITTERROOT	4	96	76
BITTERROOT	12	93	74

LOWER CLARK FORK RIVER BASIN as of March 1, 1993

Snowpack conditions in the Lower Clark Fork River Basin remain below average, decreased 6 percent from February 1 and were 9 percent below last year. Snow water content was 77 percent of average and 91 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation during February was again well below average at 40 percent and was 33 below last year. Water year precipitation, beginning October 1, 1992, was below average at 72 percent and 14 percent below last year.

Noxon Rapids storage on the last day of February was 76 percent of average and 30 percent below last year.

Streamflows are forecast to be below average at 77 percent but 3 percent higher than last year. February streamflow for the Clark Fork River below Missoula was well below average at 51 percent and 33 percent below last year; the Clark Fork River at St. Regis was well below average at 53 percent and 30 percent below last year.

LOWER CLARK FORK RIVER BASIN
Streamflow Forecasts - March 1, 1993

	<--- Drier --- Future Conditions --- Wetter --->						
Forecast Pt	Chance of Exceeding *						
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
CLARK FORK ab Missoula							
APR-JUL	745	970	1120	75	1270	1490	1487
APR-SEP	865	1110	1270	75	1430	1680	1681
CLARK FORK bl Missoula							
APR-JUL	1480	1810	2040	73	2270	2600	2788
APR-SEP	1660	2020	2270	73	2520	2880	3099
CLARK FORK at St. Regis (1)							
APR-JUL	1360	2230	2620	71	3010	3880	3686
APR-SEP	1510	2470	2910	71	3350	4310	4095
CLARK FORK nr Plains (1,2)							
APR-JUL	5090	6800	7580	72	8360	10100	10450
APR-SEP	5590	7470	8330	72	9190	11100	11470
THOMPSON RIVER nr Thompson Falls							
APR-JUL	109	136	155	72	174	200	214
APR-SEP	127	156	176	73	196	225	240
PROSPECT CREEK at Thompson Falls							
APR-JUL	61	74	83	67	92	105	123
APR-SEP	69	82	91	68	100	114	132

Forecast Pt Forecast Period	<--- Drier --- 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Prob) (1000AF)	(% AVG.)	--- Wetter ---> 30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
CLARK FK at Whitehorse Rpds (1,2)							
APR-JUL	5760	7730	8620	73	9510	11500	11730
APR-SEP	6340	8510	9490	73	10500	12600	12910

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

LOWER CLARK FORK RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********** This Year	Last Year	Average
NOXON RAPIDS	335.0	227.5	322.8	298.1

LOWER CLARK FORK RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
UPPER CLARK FORK	38	93	74
BITTERROOT	12	93	74
LOWER CLARK FORK	13	90	77
CLARK FORK TOTAL	59	93	75
FLATHEAD	45	92	78
PEND OREILLE	99	93	77

JEFFERSON RIVER BASIN as of March 1, 1993

Snowpack conditions in the Jefferson River Basin are now below average, dropped 12 percent from last month and are 10 percent below last year. Snow water content was 84 percent of average and 90 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation for February was well below average at 67 percent and nearly the same as last year. Water year precipitation, beginning October 1, 1992, dropped to below average at 86 percent and was slightly below last year.
Reservoir storage on the last day of February was 52 percent of average and 33 percent below last year. Lima storage was 0 percent of average and 0 percent of last year; Clark Canyon storage was 57 percent of average and 30 percent below last year; and Ruby River storage was 90 percent of average and 17 percent below last year.

Streamflows are forecast to be below average at 73 percent and 15 percent below those of last year. February streamflow on the Beaverhead River near Grant was well below average at 60 percent.

JEFFERSON RIVER BASIN
Streamflow Forecasts - March 1, 1993

Forecast Pt / Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
RED ROCK RIVER near Monida (2)							
APR-JUL	51	69	81	83	93	111	97
APR-SEP	51	72	86	81	100	121	105
BEAVERHEAD RIVER near GRANT (2)							
APR-JUL	36	78	107	81	136	178	132
APR-SEP	31	82	117	75	152	205	155
BEAVERHEAD RIVER at Barretts (2)							
APR-JUL	72	115	144	83	173	215	172
APR-SEP	77	126	160	78	194	245	203
RUBY RIVER near Alder							
APR-JUL	46	63	74	89	86	102	83
APR-SEP	56	76	89	89	102	122	99
BIG HOLE RIVER near Melrose							
APR-JUL	275	385	460	71	535	645	641
APR-SEP	295	415	500	71	585	705	697
BOULDER RIVER near Boulder							
APR-JUL	27	50	66	77	82	105	85
APR-SEP	30	55	72	79	89	114	91

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
WILLOW CREEK near Harrison							
APR-JUL	3.7	9.9	14.1	79	18.3	25	17.7
APR-SEP	4.5	11.4	16.1	80	21	28	20
JEFFERSON RIVER near Three Forks (2)							
APR-JUL	230	475	640	69	805	1050	920
APR-SEP	320	570	740	73	910	1160	1003

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

JEFFERSON RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
LIMA	84.0	0.0	12.3	34.5
CLARK CANYON	255.6	83.0	119.1	146.6
RUBY RIVER	38.8	24.7	28.4	27.3

JEFFERSON RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
BEAVERHEAD	14	95	92
RUBY	9	91	85
BIGHOLE	15	83	74
BOULDER	9	94	83
JEFFERSON	39	91	84

MADISON RIVER BASIN as of March 1, 1993

Snowpack conditions in the Madison River Basin remain near average, dropping 3 percent from February 1 but are 18 percent higher than last year. Snow water content was 102 percent of average and 118 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation during February was below average at 81 percent and nearly the same as last year. Water year precipitation, beginning October 1, 1992, was average at 104 percent and 15 percent above last year.

Reservoir storage on the last day of February was 104 percent of average and 5 percent above last year. Ennis Lake storage was 88 percent of average and the same as last year and Hebgen Lake storage was 106 percent of average and 6 percent above last year.

Streamflows are forecast to be slightly below average at 89 percent and are 8 percent below those of last year. February streamflow at the Madison River near Grayling was slightly below average at 89 percent and 3 percent below last year and the Madison River near McAllister was below average at 76 percent and 14 percent below last year.

MADISON RIVER BASIN
Streamflow Forecasts - March 1, 1993

	<=== Drier ===	Future Conditions	=== Wetter ===>		
Forecast Pt	========== Chance of Exceeding * ==========				
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
MADISON RIVER near Grayling			(2)				
APR-JUL	315	355	380	100	405	445	380
APR-SEP	400	450	480	98	510	560	486
MADISON RIVER near McAllister			(2)				
APR-JUL	455	515	555	83	595	655	662
APR-SEP	595	660	705	84	750	815	831

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

MADISON RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********** This Year	Last Year	Average
ENNIS LAKE	41.0	29.9	29.9	34.1
HEBGEN LAKE	377.5	263.1	248.0	247.8

MADISON RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
MADISON above HEBGEN	7	129	108
LOWER MADISON	10	108	96
MADISON	17	118	102

GALLATIN RIVER BASIN as of March 1, 1993

Snowpack conditions in the Gallatin River Basin dropped to below average, decreasing 6 percent from last month, but are 3 percent higher than last year. Snow water content was 84 percent of average and 103 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation during February was well below average at 51 percent and 15 percent below last February. Water year precipitation, beginning October 1, 1992, is now below average at 89 percent but is 14 percent above last year.

Middle Creek storage on the last day of February was 71 percent of average and 7 percent below last year.

Streamflows are forecast to be below average but 11 percent higher than last year. February streamflow for the Gallatin River near Gateway was below average at 79 percent and 22 percent below last year and the Gallatin River at Logan was below average at 84 percent but 2 percent above last year.

GALLATIN RIVER BASIN
Streamflow Forecasts - March 1, 1993

Forecast Pt / Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
GALLATIN RIVER near Gateway							
APR-JUL	335	380	410	92	440	485	441
APR-SEP	405	455	485	93	515	565	518
E & W FK HYALITE CREEK near Bozeman							
APR-JUL	13.5	16.2	18.1	78	20	23	23
APR-SEP	16.3	19.1	21	80	23	26	26
HYALITE CREEK near Bozeman (2)							
APR-JUL	21	25	28	77	31	36	36
APR-SEP	25	30	33	78	36	41	42
GALLATIN RIVER at Logan							
APR-JUL	260	345	400	80	455	540	498
APR-SEP	335	420	480	82	540	625	581

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

GALLATIN RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
MIDDLE CREEK	10.2	2.7	2.9	3.8

GALLATIN RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
UPPER GALLATIN	9	109	91
EAST GALLATIN	7	94	73
GALLATIN	14	103	84

MAINSTEM MISSOURI RIVER BASIN as of March 1, 1993

Snowpack conditions in the Mainstem Missouri River Basin dropped to below average, decreasing 12 percent from February 1, but are 8 percent higher than last year. Snow water content was 85 percent of average and 108 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation during February was well below average at 58 percent but was 46 percent above last year. Water year precipitation, beginning October 1, 1992, fell to below average at 87 percent but was 10 percent above last year.

Reservoir storage on the last day of February was 88 percent of average and 7 percent below last year. Canyon Ferry Lake storage was 86 percent of average and 8 percent below last year; Helena Valley storage was 129 percent of average and 29 percent above last year; Lake Helena storage was 107 percent of average and 2 percent below last year; Hauser & Helena storage was 103 percent of average and 1 percent below last year; Holter Lake storage was 113 percent of average and 5 percent below last year; and Fort Peck Lake storage was 88 percent of average and 11 percent below last year.

Streamflows are forecast to be below average at 71 percent and 18 percent below last year. February streamflow for the Missouri River near Toston was below average at 72 percent and 16 percent below last year and the Missouri River below Fort Peck was well below average at about 39 percent and 46 percent below last year.

MAINSTEM MISSOURI RIVER BASIN
Streamflow Forecasts - March 1, 1993

	<=== Drier ===	Future Conditions	=== Wetter ===>			
Forecast Pt	Chance of Exceeding *					
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
MISSOURI RIVER at Toston			(2)				
APR-JUL	890	1310	1590	76	1870	2290	2075
APR-SEP	1170	1610	1900	78	2200	2630	2411
PRICKLY PEAR CREEK near Clancy							
APR-JUL	3.8	13.5	20	86	27	36	23
APR-SEP	5.9	16.7	24	88	31	42	27
SUN RIVER at Gibson Dam			(2)				
APR-JUL	250	320	370	77	420	490	478
APR-SEP	285	365	415	78	465	545	526
MISSOURI RIVER at Fort Benton			(2)				
APR-JUL	1120	1850	2350	76	2850	3580	3087
APR-SEP	1450	2240	2780	74	3320	4110	3711
MARIAS RIVER near Shelby			(2)				
APR-JUL	67	158	220	49	280	375	447
APR-SEP	81	173	235	48	295	390	487

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
MISSOURI RIVER at Virgelle			(2)				
APR-JUL	1090	1910	2470	68	3030	3850	3595
APR-SEP	1490	2380	2980	70	3580	4470	4207
MISSOURI RIVER near Landusky			(2)				
APR-JUL	1240	2120	2720	69	3320	4200	3897
APR-SEP	1780	2670	3280	71	3890	4780	4580
MISSOURI RIVER below Fort Peck			(2)				
APR-JUL	1160	2050	2660	66	3270	4160	4015
APR-SEP	1730	2570	3140	70	3710	4550	4467

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

MAINSTEM MISSOURI RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
CANYON FERRY LAKE	2043.0	1323.0	1432.0	1540.0
HELENA VALLEY	9.2	5.4	4.2	4.2
LAKE HELENA	10.4	10.9	11.1	10.2
HAUSER & HELENA	61.9	63.1	63.6	61.0
HOLTER LAKE	81.9	77.2	81.1	68.2
FORT PECK LAKE (MAF)	18.9	10.4	11.7	14.7

MAINSTEM MISSOURI RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
MISSOURI HEADWATERS	64	100	89
WEST SIDE MISSOURI	7	95	81
SMITH-BELT	7	118	88
MAINSTEM MISSOURI	14	108	85
SUN-TETON-MARIAS	14	86	71
JUDITH-MUSSELSHELL	10	117	87
MISSOURI above FORT PECK	94	99	85
MILK RIVER	8	117	86
MISSOURI in MONTANA	99	100	85
MISSOURI blw YELLOWSTONE	172	100	81

SMITH-JUDITH-MUSSELSHELL RIVER BASINS as of March 1, 1993

Snowpack conditions in the Smith-Judith-Musselshell River Basins dropped to below average, dropped 5 percent from February 1 but are 14 percent higher than last year. Snow water content was 87 percent of average and 114 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation during February was well below average at 57 percent and was 24 percent above last year. Water year precipitation, beginning October 1, 1992, remains near average at 96 percent and was 22 percent above last year.

Reservoir storage on the last day of February was 120 percent of average and 1 percent above last year. Smith River storage was 60 percent of average and 13 percent below last year; Bair storage was 102 percent of average and 25 percent below last year; Martinsdale storage was 63 percent of average and 12 percent below last year; and Deadman's Basin was 120 percent of average and 5 percent above last year.

Streamflows are forecast to be below average at 87 percent but 15 percent above last year.

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Streamflow Forecasts - March 1, 1993

	<--- Drier ---	Future Conditions	--- Wetter --->		
Forecast Pt	Chance of Exceeding *				
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
SMITH RIVER near Fort Logan							
APR-JUL	28	44	55	89	66	82	62
APR-SEP	38	55	66	90	77	94	73
SHEEP CREEK nr White Sulphur Springs							
APR-JUL	11.7	14.4	16.2	89	18.0	21	18.1
APR-SEP	14.1	17.0	19.0	90	21	24	21
NF MUSSELSHELL near Delpine							
APR-JUL	1.9	3.3	4.3	89	5.3	6.7	4.8
APR-SEP	2.4	3.9	5.0	89	6.1	7.6	5.6

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
SF MUSSELSHELL abv Martinsdale							
APR-JUL	12.8	31	44	84	57	75	52
APR-SEP	14.8	34	47	83	60	79	56

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
SMITH RIVER	10.6	4.0	4.6	6.7
NEWLAN CREEK		NO REPORT		
BAIR	7.0	4.3	5.7	4.2
MARTINSDALE	23.1	5.9	6.7	9.4
DEADMAN'S BASIN	72.2	65.7	62.4	46.1

SMITH-JUDITH-MUSSELSHELL RIVER BASINS
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
SMITH-BELT	7	118	88
JUDITH-MUSSELSHELL	10	117	87

SUN-TETON-MARIAS RIVER BASINS as of March 1, 1993

Snowpack conditions in the Sun-Teton-Marias River Basins remain below average, decreasing by 12 percent from February 1, and are 14 percent below last year. Snow water content was 71 percent of average and 86 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation for February was well below average at 35 percent and 37 percent below last year. Water year precipitation, beginning October 1, 1992, was below average at 76 percent and 5 percent below last year.

Reservoir storage on the last day of February was 109 percent of average and 6 percent below last year. Gibson storage was 77 percent of average and 27 percent below last year; Pishkun storage was 107 percent of average and 1 percent below last year; Willow Creek storage was 104 percent of average and 25 percent below last year; Lower Two Medicine Lake storage was 175 percent of average and 8 percent above last year; Four Horns Lake storage was 110 percent of average and 1 percent above last year; Swift storage was 79 percent of average and 17 percent below last year; Lake Frances storage was 54 percent of average and 56 percent below last year; and Lake Elwell (Tiber) storage was 109 percent of average and 2 percent above last year.

Streamflows are forecast to be well below average at 65 percent and 28 percent below last year. February streamflow for the Sun River at Gibson Dam was below average and 13 percent below last year.

SUN-TETON-MARIAS RIVER BASINS
Streamflow Forecasts - March 1, 1993

Forecast Pt / Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
SUN RIVER at Gibson Dam				(2)			
APR-JUL	250	320	370	77	420	490	478
APR-SEP	285	365	415	78	465	545	526
TWO MEDICINE RIVER near Browning				(2)			
APR-JUL	66	112	143	66	174	220	215
APR-SEP	77	123	154	67	185	230	228
BADGER CREEK near Browning				(2)			
APR-JUL	37	57	70	67	83	103	104
APR-SEP	48	69	83	69	97	118	120
SWIFT RESERVOIR Inflow near Dupuyer							
APR-JUL	23	38	48	70	58	73	68
APR-SEP	32	48	58	72	69	84	80

Forecast Pt Forecast Period	<== Drier == 90% (1000AF)	70% (1000AF)	Future Conditions 50% (Most Prob) (1000AF) (% AVG.)	== Wetter ==> 30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
			Chance of Exceeding *			
DUPUYER CREEK near Valier						
APR-JUL	3.9	6.2	8.5 54	14.5	23	15.5
APR-SEP	4.4	7.0	9.7 55	16.0	25	17.4
CUT BANK CREEK at Cut Bank						
APR-JUL	29	44	54 62	64	79	87
APR-SEP	34	50	60 62	71	86	96
MARIAS RIVER near Shelby (2)						
APR-JUL	67	158	220 49	280	375	447
APR-SEP	81	173	235 48	295	390	487

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

SUN-TETON-MARIAS RIVER BASINS
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********* Usable Storage ********* This Year	Last Year	Average
GIBSON	99.1	36.8	50.1	47.5
PISHKUN	32.0	18.9	19.0	17.6
WILLOW CREEK	32.2	22.5	29.8	21.7
LOWER TWO MEDICINE LAKE	11.9	12.1	11.2	6.9
FOUR HORNS LAKE	19.2	13.7	13.8	12.5
SWIFT	30.0	13.0	15.6	16.4
LAKE FRANCES	112.0	37.4	84.2	69.7
LAKE ELWELL (TIBER)	1347.0	687.3	672.3	580.2

SUN-TETON-MARIAS RIVER BASINS
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
SUN-TETON	9	88	73
MARIAS	6	84	69
SUN-TETON-MARIAS	14	86	71

Snowpack conditions in the St. Mary and Milk River Basins are below average, dropping 8 percent from February 1, but are 13 percent above last year. Snow water content was 76 percent of average and 113 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation for February was once again well below average and was 36 percent of average and 37 percent below last year. Water year precipitation, beginning October 1, 1992, was below average at 78 percent and is 4 percent below last year.

Reservoir storage on the last day of February was 57 percent of average and 50 percent below last year. Lake Sherburne storage was 105 percent of average and 4 percent above last year; Fresno storage was 44 percent of average and 64 percent below last year; Beaver Creek storage was 145 percent of average and 7 percent below last year; and Nelson storage was 57 percent of average and 67 percent below last year.

Streamflows are forecast to be below average at 82 percent but 5 percent higher than last year.

ST. MARY and MILK RIVER BASINS
Streamflow Forecasts - March 1, 1993

Forecast Pt	<== Drier ==	Future Conditions	== Wetter ==>			
	Chance of Exceeding *					
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
SWIFTCURRENT CREEK at Sherburne (2)							
APR-JUL	68	76	82	76	88	96	107
APR-SEP	83	92	98	78	104	113	125
ST. MARY RIVER near Babb (2)							
APR-JUL	265	290	310	78	330	355	395
APR-SEP	320	350	375	80	400	430	463
MILK RIVER at Eastern Crossing							
MAR-SEP	210	230	250	96	265	285	258
MILK RIVER at Eastern Crossing (2)							
MAR-SEP	54	60	66	75	93	121	88

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

ST. MARY and MILK RIVER BASINS
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
LAKE SHERBURNE	64.3	27.5	26.4	26.3
FRESNO	127.0	23.0	64.1	52.0
BEAVER CREEK	3.5	2.9	3.1	2.0
NELSON	66.8	12.3	37.0	35.3

ST. MARY and MILK RIVER BASINS
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
MILK HEADWATERS	3	92	77
BEAR PAW	5	272	113
MILK RIVER	8	117	86
ST. MARY	5	90	72
ST. MARY and MILK	10	104	77
BOW RIVER in ALBERTA	21	57	51
OLDMAN RIVER in ALBERTA	7	78	78

UPPER YELLOWSTONE RIVER BASIN as of March 1, 1993

Snowpack conditions in the Upper Yellowstone River Basin remain below average, decreasing 4 percent from February 1, and are 3 percent below last year. Snow water content was 77 percent of average and 97 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation for February was again well below average at 55 percent and was 1 percent below last year. Water year precipitation, beginning October 1, 1992, was below average at 81 percent which was 1 percent above last year.

Reservoir storage on the last day of February was 99 percent of average and 8 percent above last year. Mystic Lake storage was 45 percent of average and 73 percent above last year and Cooney storage was 119 percent of average and 3 percent above last year.

Streamflows are forecast to be below average at 77 percent and 9 percent below last year. February streamflow for the Yellowstone River at Corwin was below average at 72 percent and 30 percent below last year; the Yellowstone River near Livingston was below average at 84 percent and 13 percent below last year; the Boulder River at Big Timber was average at 95 percent and 12 percent higher than last year; and West Rosebud Creek near Roscoe was below average at 70 percent but 17 percent higher than last year.

UPPER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - March 1, 1993

	<== Drier ==	Future Conditions	== Wetter ==>		
Forecast Pt	Chance of Exceeding *				
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
YELLOWSTONE RIVER at Corwin Springs							
APR-JUL	1050	1160	1230	76	1300	1410	1609
APR-SEP	1270	1400	1490	76	1580	1710	1937
YELLOWSTONE RIVER near Livingston							
APR-JUL	1170	1310	1410	76	1510	1650	1855
APR-SEP	1440	1610	1720	76	1830	2000	2241
SHIELDS RIVER near Livingston							
APR-JUL	99	124	140	86	156	181	162
APR-SEP	115	139	156	87	173	197	179
BOULDER RIVER at Big Timber							
APR-JUL	197	240	265	79	290	335	335
APR-SEP	220	260	290	79	320	360	364
WEST ROSEBUD CREEK near Roscoe (2)							
APR-JUL	36	44	49	80	54	62	61
APR-SEP	49	58	63	79	69	77	79

Forecast Pt Forecast Period	<<== Drier == Future Conditions == Wetter ==> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
STILLWATER RIVER nr Absarokee				(2)			
APR-JUL	225	310	370	74	430	515	498
APR-SEP	285	370	430	72	490	575	593
CLARKS FORK RIVER near Belfry							
APR-JUL	290	345	385	72	425	485	532
APR-SEP	320	380	420	71	460	520	590
RED LODGE CREEK blw Cooney Res				(2)			
APR-JUL	6.6	24	35	74	47	63	47
APR-SEP	16.8	34	45	78	56	73	57
YELLOWSTONE RIVER at Billings				(2)			
APR-JUL	2090	2510	2800	78	3090	3510	3577
APR-SEP	2610	2970	3280	77	3590	3960	4211

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

UPPER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
MYSTIC LAKE	21.0	2.6	1.5	5.8
COONEY	27.4	18.4	17.9	15.4

UPPER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
YELLOWSTONE ab LIVINGSTON	17	104	82
SHIELDS	5	91	76
BOULDER-STILLWATER	4	102	82
CLARK'S FORK-ROCK CREEK	13	83	68
UPPER YELLOWSTONE above BIGH	35	97	77

LOWER YELLOWSTONE RIVER BASIN as of March 1, 1993

Snowpack conditions in the Lower Yellowstone River Basin remain below average, decreasing 6 percent from February 1, and are 1 percent above last year. Snow water content was 75 percent of average and 101 percent of last year. Refer to the watershed snowpack analysis that follows for individual watershed percent of average and percent of last year figures.

Mountain precipitation for February was well below average at 52 percent but was 59 percent above last year. Water year precipitation, beginning October 1, 1992, dropped to below average at 84 percent and was 1 percent below last year.

Reservoir storage on the last day of February was 99 percent of average and 4 percent below last year. Bighorn Lake storage was 101 percent of average and 4 percent below last year and Tongue River was 61 percent of average and 14 percent above last year.

Streamflows are forecast to be below average at 76 percent and 10 percent below last year. February streamflow at the Yellowstone River near Billings was well below average at 62 percent and 22 percent below last year; the Bighorn River near Saint Xavier was well below average at 65 percent and 38 percent below last year; and the Yellowstone River near Sidney was below average at 85 percent but 6 percent above last year.

LOWER YELLOWSTONE RIVER BASIN
Streamflow Forecasts - March 1, 1993

	<== Drier ==	Future Conditions	== Wetter ==>			
Forecast Pt	Chance of Exceeding *					
Forecast Period	90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
YELLOWSTONE RIVER at Billings (2)							
APR-JUL	2090	2510	2800	78	3090	3510	3577
APR-SEP	2610	2970	3280	77	3590	3960	4211
BIGHORN RIVER near St. Xavier (2)							
APR-JUL	485	880	1150	70	1420	1810	1645
APR-SEP	540	955	1240	69	1520	1940	1794
LITTLE BIGHORN RIVER nr Hardin							
APR-JUL	14.2	65	100	71	135	186	140
APR-SEP	19.9	75	113	71	151	205	157
TONGUE RIVER near Decker (2)							
APR-JUL	71	140	186	81	235	300	227
APR-SEP	85	156	205	84	255	325	244
YELLOWSTONE at Miles City (2)							
APR-JUL	2360	3380	4070	74	4760	5780	5431
APR-SEP	3200	3920	4660	74	5400	6090	6281
POWDER RIVER at Moorhead							
APR-JUL	42	83	143	67	205	290	211
APR-SEP	46	88	150	68	210	285	221

Forecast Pt Forecast Period	<--- Drier --- Future Conditions --- Wetter ---> Chance of Exceeding * 90% (1000AF)	70% (1000AF)	50% (Most Prob) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	30 Yr Avg (1000AF)
POWDER RIVER near Locate							
APR-JUL	45	96	167	66	240	340	252
APR-SEP	50	109	182	66	255	355	276
YELLOWSTONE RIVER nr Sidney (2) (from YB run)							
APR-JUL			4400	77			5695
APR-SEP			4980	73			6814

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
(2) - The value is natural flow - actual flow may be affected by upstream water management.

LOWER YELLOWSTONE RIVER BASIN
Reservoir Storage (1000AF) End of February

Reservoir	Usable Capacity	********** Usable Storage ********* This Year	Last Year	Average
BIGHORN LAKE	1356.0	815.0	851.8	810.4
TONGUE RIVER	68.0	18.3	15.5	30.1

LOWER YELLOWSTONE RIVER BASIN
Watershed Snowpack Analysis - March 1, 1993

Watershed	Number of Data Sites	This Year as Percent of Last Year	Average
WIND RIVER (Wyoming)	17	119	79
BIGHORN RIVER (Wyoming)	21	96	73
LITTLE BIGHORN	3	96	74
TONGUE RIVER (Wyoming)	10	95	73
POWDER RIVER (Wyoming)	9	85	71
YELLOWSTONE RIVER	79	99	76

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SOIL CONSERVATION SERVICE

Montana
Basin Outlook Report

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